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TRANSMITTAL FORM	Application Number	10/719,167	
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	First Named Inventor	Guo et al.	
	Art Unit	1713	
	Examiner Name	Peter D. Mulcahy	
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Firm Name	Rohm and Haas Company		
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GROUP ART UNIT: 1713

APPEAL NO. _____

OCT 15 2007

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

APPEAL BRIEF

In re the Application of Ching-Jen Chang et al.

Filed: November 21, 2003

Serial No. 10/719,167

For: MULTI-STAGE POLYMER COMPOSITIONS HAVING A TRIGGERED
RESPONSE

Kenneth Crimaldi
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Peter D. Mulcahy
Examiner

Enclosed:
Transmittal Form

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September 21, 2007

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OCT 15 2007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Ching-Jen Chang et al. :

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Application No.: 10/719,167

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Group No.: 1713

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Filed: November 21, 2003

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Examiner: Peter D. Mulcahy

For: MULTI-STAGE POLYMER COMPOSITIONS HAVING A TRIGGERED
RESPONSE

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

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APPEAL BRIEF

This is an appeal from the rejection dated July 3, 2007 finally rejecting claims 1, 3, 5 and 10. The rejected claims are set out in Appendix J. Appellants filed a Notice of Appeal pursuant to 37 C.F.R. § 1.191 on September 13, 2007.

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(C) Real Party In Interest

The owner of the present application and the invention contained therein is
ROHM AND HAAS COMPANY.

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(D) Related Appeals, Interferences or Judicial Proceedings

No appeals, interferences or judicial proceedings are known to Appellants, the Appellants' legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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(E) Status Of Claims

The status of the claims is as follows:

Claims pending: 1, 3, 5 and 10

Allowed claims: none

Claims objected to: none

Claims canceled: 2, 4 and 6-9

Claims rejected: 1, 3, 5 and 10

Claims on appeal: 1, 3, 5 and 10

Claims withdrawn from consideration by the Examiner: none.

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(F) Status Of Amendments

Appellants have not filed an amendment after final rejection in the present application.

(G) Summary of Claimed Subject Matter

Claim 1: The present invention provides a triggered response barrier composition [page 4, line 25] comprising: one or more multi-stage emulsion polymers [page 7, lines 19-21] that comprise (a) 70-99 weight percent of an alkali soluble/swellable emulsion polymer as a first stage; and (b) 1 to 30 weight percent of a more cross-linked alkali soluble/swellable emulsion polymer or a non- alkali soluble/swellable emulsion polymer as a second stage [page 4, lines 8-11]; wherein the multi-stage emulsion polymer surrounds, encapsulates or forms a matrix with one or more active ingredients [page 4, lines 27-28] and the multi-stage emulsion polymer disperses, disintegrates, dissolves, destabilizes, swells, deforms, softens, flows or combinations thereof, releasing the one or more active ingredients to an aqueous system as a result of a change in ionic strength of the aqueous system [page 4, line 30 to page 5, line 3].

(H) Grounds of Rejection to be Reviewed on Appeal

Claims 1, 3, 5 and 10 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sonnabend (U.S. Pat. No. 4,384,096) or Gassenmeier et al. (U.S. 2001/0031714; "Gassenmeier") each taken alone and in view of Eisenhart et al. (U.S. 5,451,641; "Eisenhart"). Claims 1, 3, 5 and 10 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting over claims 1-8 and 1-10 of copending Application Nos. 10/619,061 and 10/348,375, respectively, in view of Eisenhart.

(I) Argument

Regarding whether or not claims 1, 3, 5 and 10 are unpatentable over the aforementioned references:

- (a) The Prior Art Fails to Provide a Motivation to Modify its Teachings to Arrive at the Claimed Invention
- (i) 35 U.S.C. § 103(a) rejection

A *prima facie* case of obviousness requires that the prior art provides a motivation to modify its teachings to produce the claimed invention. *In re Kotzab*, 217 F.3d 1365 (Fed. Cir. 2000). The final Office Action asserts as a motivation only that multi-stage polymerization is well-known, and that one skilled in the art “readily appreciates that the ‘multi-stage’ polymerization techniques of Eisenhart would provide a desirable polymer when practiced within the teachings of Sonnabend or Gassenmeier.” Although multi-stage polymers are known, there is no reason known to Appellants, and no reason cited by the Office that one would expect them to be “desirable” within the technology of Sonnabend or Gassenmeier. Indeed, one might have expected that a multi-stage polymer would not function as well. Multi-stage polymers are believed to have a core-shell structure, as described from page 7, line 19 to page 8, line 15. The claims recite a polymer whose shell (second stage) is more cross-linked than its core or is not alkali soluble (and hence less polar than the core). Such a polymer might have been believed not release active ingredients as well as a single-stage polymer. In any event, there is no reason in the references, or otherwise of record, to motivate one to combine the multi-stage polymers of Eisenhart with the teachings of Sonnabend or Gassenmeier. Therefore, the claims cannot be obvious over the references, and the rejection should be withdrawn.

To address the required motivation to modify, the Advisory Action mailed September 10, 2007 provides only the statement that

One of ordinary skill in the art would have a reasonable expectation of the result when using a multi-stage

polymerization process as in Eisenhart when forming the polymers of Gassenmeier or Sonnabend. The reasonable expectation of results provides sufficient motivation to combine the teachings.

First, the mere "expectation of results" is not sufficient to provide a motivation to modify. One always has an expectation of some kind of result, but there is not always a motivation to make a particular modification. Second, the law requires that the prior art provide separately a motivation and a reasonable expectation of success (see part (b) below). Even if one would have had an actual expectation of success, one would have needed first a motivation to modify.

(ii) Provisional obviousness-type double patenting rejection over copending Application Nos. 10/619,061 and 10/348,375 in view of Eisenhart

None of the claims of the cited copending applications discloses or suggests the multi-stage polymers recited in the present claims. As Appellants have argued above in response to the Section 103 rejections, the prior art must provide a motivation to modify its teachings to produce the claimed invention. The Office has provided no motivation that would lead one to combine the multi-stage polymers of Eisenhart with the disclosure of the cited copending applications. Therefore, Appellants respectfully submit that the invention as presented herein is patentable over the prior art of record.

(b) One Skilled in the Art Would Have Had No Reasonable Expectation of Success

(i) 35 U.S.C. § 103(a) rejection

A *prima facie* case of obviousness requires that one skilled in the art would have had a reasonable expectation of success in light of the prior art. *In re Dow Chemical*, 837 F.2d 469 (Fed. Cir. 1988). The Office has provided no evidence that one skilled in the art would have had a reasonable expectation that the multi-stage polymers disclosed in

Eisenhart would function well to release active ingredients according to the disclosure of Sonnabend or Gassenmeier. Accordingly, the Office has not established a *prima facie* case of obviousness.

In responding to Appellants' earlier argument that one skilled in the art would not have had a reasonable expectation of success, the final Office Action states only that "one clearly has a reasonable expectation of success." This is merely a conclusory and unsupported assertion which does not satisfy the Office's burden on this issue.

(ii) Provisional obviousness-type double patenting rejection over copending Application Nos. 10/619,061 and 10/348,375 in view of Eisenhart

The Office has provided no evidence that one skilled in the art would have had a reasonable expectation that the multi-stage polymers disclosed in Eisenhart would function well to release active ingredients when used according to the disclosure of Sonnabend or Gassenmeier. Accordingly, the Office has not established a *prima facie* case of obviousness.

(c) Appellants Have Obtained Unexpected Results

Even if the Office had established a *prima facie* case of obviousness, it could be overcome by a showing of unexpected results. *In re Soni*, 54 F.3d 746 (Fed. Cir. 1995). Appellants have disclosed in the present application (see Example 2, page 35) that multi-stage polymers within the scope of their claims have superior properties as barrier compositions, when compared to single-stage polymers. Nothing in the references suggests that this result could have been obtained. Therefore, Appellants respectfully submit that the results presented in Example 2 were unexpected, and would refute a *prima facie* case of obviousness.

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CONCLUSION

Based on the foregoing, Appellants respectfully submit that the pending claims are currently in condition for allowance. Appellants respectfully request the Board to pass the pending claims to allowance.

Enclosed herewith, Appellants have filed a Certificate of Mailing to establish the timely filing of this Appeal Brief.

The Commissioner is hereby authorized to charge any additional fee which may be required, or to credit any overpayments to Deposit Account 18-1850.

Respectfully submitted,



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Registration No. 40,968

ROHM AND HAAS COMPANY
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September 21, 2007

(J) Claims Appendix

1. A triggered response barrier composition comprising: one or more multi-stage emulsion polymers that comprise (a) 70-99 weight percent of an alkali soluble/swellable emulsion polymer as a first stage; and (b) 1 to 30 weight percent of a more cross-linked alkali soluble/swellable emulsion polymer or a non-alkali soluble/swellable emulsion polymer as a second stage; wherein the multi-stage emulsion polymer surrounds, encapsulates or forms a matrix with one or more active ingredients and the multi-stage emulsion polymer disperses, disintegrates, dissolves, destabilizes, swells, deforms, softens, flows or combinations thereof, releasing the one or more active ingredients to an aqueous system as a result of a change in ionic strength of the aqueous system.

3. The triggered response barrier composition according to claim 1, wherein the aqueous system is a fabric washing or cleaning system and wherein the one or more active ingredients are selected from the group consisting of: fabric softeners, fabric softener formulations, cationic, anionic, amphoteric and non-ionic surfactants, fragrances and combinations thereof.

5. The triggered response barrier composition according to claim 1, wherein the multi-stage emulsion polymer first stage is prepared by polymerizing one or more monomers selected from the group consisting of: acrylic acid, methacrylic acid, ethyl acrylate, ethyl methacrylate, methyl methacrylate, 2-ethylhexyl acrylate, butyl acrylate, butyl methacrylate, 2-hydroxyethyl acrylate, 2-hydroxybutyl methacrylate; styrene, vinyltoluene, t-butylstyrene, isopropylstyrene, and p-chlorostyrene; vinyl acetate, vinyl butyrate, vinyl caprolate; acrylonitrile, methacrylonitrile, butadiene, acrylic or methacrylic acid esters of a C₁₂-C₂₄ alkyl monoether of a polyalkylene glycol having from 6 to 70 oxyalkylene units, cetyl-stearyl(ethyleneoxide)₂₀ methacrylate and diallyl phthalate and wherein the multi-stage emulsion polymer second stage is prepared by polymerizing one or more monomers selected from the

group consisting of: methylmethacrylate, styrene, allylmethacrylate, diallyl phthalate and butylene glycol diacrylate.

10. The triggered response barrier composition according to claim 1, having 80-95 weight percent of the alkali soluble/swellable emulsion polymer, which has 0.01-5 weight percent of one or more polyethylenically unsaturated monomer units; and 5-20 weight percent of the more cross-linked alkali soluble/swellable emulsion polymer, which has 0.1-10 weight percent of one or more polyethylenically unsaturated monomer units.

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(K) Evidence Appendix

No evidence was submitted during prosecution.

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(L) Related Proceedings Appendix

There are no related proceedings.